

CLAIMS--I claim:

1. A method of enabling an operator to generate any one of a plurality of inputs, comprising:

- (a) providing a manual input means having a plurality of digit-operated switches by which a human operator can generate said plurality of inputs by entering chords, each chord comprising a unique combination of said switches, each of said switches being positioned to be operated by a respective digit of said operator, and

- (b) providing a legend presenting a plurality of first indicia representing said plurality of inputs, said first plurality of indicia selected from the class consisting of visual and tactile indicia, a first sub-plurality of said plurality of first indicia arranged in a plurality of groups, each of said groups representing a specific digit, each chord corresponding to a specific group of said groups comprising a specific switch of said switches, said specific switch corresponding to the digit represented by said specific group, said groups arranged so that said operator can associate said groups directly with said respective digits, thereby mapping each first indicium of each of said groups to the digit represented by the group,

whereby said operator can easily determine one or two of said digits corresponding to each indicium of said first plurality by visualizing the position of the indicium relative to said groups.

2. The method of Claim 1 wherein said first indicia are symbols found on a standard computer keyboard.

3. The method of Claim 1 wherein each chord corresponding to a specific group of said groups of indicia comprises exactly one of said switches corresponding to a finger of a particular hand of said operator, the switch corresponding to the finger represented by the group, whereby said operator can easily determine the finger of said particular hand or the fingers of both hands corresponding to said first indicia in said groups.
4. The method of Claim 1 wherein a plurality of said groups of indicia is labeled with respective second indicia, said second indicia indicating said digits represented by said groups, whereby said operator can determine said digits represented by said groups.
5. The method of Claim 4 wherein said second indicia are colors.
6. The method of Claim 4 wherein said second indicia are areas shaped like the respective digits.
7. The method of Claim 1 wherein said first indicia of a plurality of said groups are arranged in an array of diagonal rows, each of said rows being one of said groups, whereby said operator can easily determine two of said digits corresponding to each of said first indicia of said array by visualizing the position of the indicium relative to said array.

8. The method of Claim 7 wherein a middle column of said array corresponding to corresponding digits of the left hand and the right hand of said operator is labeled with a second indicium, whereby said first indicia corresponding to corresponding digits are easily distinguished by said operator, and whereby said first indicia of said array to the left of said middle column and said first indicia of said array to the right of said middle column can be easily distinguished by said operator as separate groups.
9. The method of Claim 8 wherein said second indicium is a color.
10. The method of Claim 7 wherein a second plurality of said first indicia corresponding to two adjacent digits of a particular hand of said operator is shown adjacent to said array, each indicium of said second plurality shown between adjacent rows of said diagonal rows corresponding to the indicium, whereby said operator can easily determine said adjacent digits corresponding to each indicium of said second plurality by visualizing the position of the indicium relative to said array, and whereby said first indicia corresponding to adjacent digits of the left hand of said operator and said first indicia corresponding to adjacent digits of the right hand of said operator can be easily distinguished by said operator as separate groups.

11. The method of Claim 7 wherein a second plurality of said first indicia corresponding to digits of a particular hand of said operator is labeled with second indicia, said second indicia representing said digits of a particular hand, whereby said operator can easily determine said digits corresponding to each indicium of said second plurality.
12. The method of Claim 11 wherein said second indicia are colors.
13. The method of Claim 1 wherein said first indicia of a plurality of said groups are arranged in columns, each of said columns being one of said groups, whereby said operator can easily determine one of said digits corresponding to each of said first indicia of said columns by visualizing the position of the indicium relative to said columns.
14. The method of Claim 13 wherein each of said columns is arranged approximately in line with one of said switches, whereby said operator can easily determine said digits represented by said columns.
15. The method of Claim 13 wherein said first indicia of said columns are arranged in rows, said first indicia of each of said rows corresponding to a specific type of chord, whereby said operator can easily determine the type of chord corresponding to said first indicia of said columns by knowing the row of

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the indicium.

16. The method of Claim 15 wherein said first indicia of each of said rows are of a specific type, whereby said operator can easily determine the type of chord corresponding to said first indicia of said columns by knowing the type of the indicium, and whereby said operator can easily determine the specific chord corresponding to each of said first indicia of said columns by visualizing the column of the indicium and knowing the type of the indicium.

17. The method of Claim 1 wherein said first indicia are symbols found on a standard computer keyboard, each chord corresponding to a specific group of said groups of indicia comprises exactly one of said switches corresponding to a finger of a particular hand of said operator, the switch corresponding to the finger represented by the group,
a plurality of said groups of indicia being labeled with respective second indicia, said second indicia indicating said digits represented by said groups,
said second indicia being colors and areas shaped like the respective digits,
said first indicia of a plurality of said groups being arranged in an array of diagonal rows, each of said diagonal rows being one of said groups,

a middle column of said array corresponding to corresponding digits of the left hand and the right hand of said operator being labeled with a third indicium,

said third indicium being a color,

a second plurality of said first indicia corresponding to two adjacent digits of a particular hand of said operator is shown adjacent to said array, each indicium of said second plurality shown between adjacent rows of said diagonal rows corresponding to the indicium,

a third plurality of said first indicia corresponding to digits of a particular hand of said operator is labeled with fourth indicia, said fourth indicia representing said digits of a particular hand,

said fourth indicia being colors,

said first indicia of a plurality of said groups being arranged in columns, each of said columns being one of said groups,

each of said columns being arranged approximately in line with one of said switches,

said first indicia of said columns being arranged in horizontal rows, said first indicia of each of said horizontal rows corresponding to a specific type of chord, and

said first indicia of each of said horizontal rows being of a specific type.

18. A method of enabling an operator to generate a plurality of inputs, comprising:

- (a) providing a manual input means having a plurality of digit-operated switches by which a human operator can generate said plurality of inputs by entering chords, each of said switches operated by a specific digit of said operator, said inputs comprising letters, said letters comprising the alphabet,
- (b) providing a plurality of modifiers, said modifiers being symbols other than said letters, said modifiers used in combination with non-modifier symbols to provide an input selected from the class consisting of a different case of the non-modifier symbol and a combination of the modifier and the non-modifier symbol, said non-modifier symbols including said letters,
- (c) assigning a first plurality of chords involving only fingers to said letters, said fingers being index, middle, ring, and little fingers of said operator, and
- (d) assigning at least one chord involving only thumbs of said operator to said respective modifiers,

whereby (1) each chord composed of each chord assigned to said letters and each chord assigned to said modifiers can be assigned to a modified letter,

(2) said modified letters can be readily input by said operator by entering a chord said operator composes of one chord assigned to said letters and one chord assigned to said modifiers, (3) said combination can be a known combination of the modifier and the letter commonly used as input to known computer programs, (4) accidental input of said modified letters during input of said letters is prevented, and (5) said chords

involving only thumbs can be easily memorized by said operator as a specific type of chord assigned to said modifiers.

19. The method of Claim 18 wherein said chords of said first plurality of chords assigned to said letters correspond to two of said fingers of said operator, whereby said letters can readily be input, and whereby said chords involving two fingers can be easily memorized by said operator as a specific type of chord assigned to said letters.

20. The method of Claim 19 wherein those of said letters which occur more frequently in American English are assigned chords which are easier to enter, whereby American English is easier to input.

21. The method of Claim 19 wherein frequently occurring vowels are assigned said chords assigned to said letters corresponding to corresponding fingers of the left hand and the right hand of said operator, whereby said chords corresponding to corresponding fingers of the left hand and the right hand can be easily memorized by said operator as a specific type of chord assigned to frequently occurring vowels.

22. The method of Claim 18 wherein a second plurality of chords involving only fingers is assigned to respective characters other than letters, whereby each chord composed of each chord assigned to said characters and each chord assigned to said modifiers

can be assigned to a modified character, said modified character being a combination of the modifier and the character, and whereby said modified characters can be readily input by said operator by entering a chord said operator composes of one chord assigned to said characters and one chord assigned to said modifiers.

23. The method of Claim 22 wherein said second plurality of chords involving three of said fingers of said operator are assigned to punctuation marks and miscellaneous characters and brackets for operating a computer, whereby said punctuation marks and said miscellaneous characters and said brackets can readily be input, and whereby said first plurality of chords involving three of said fingers can be easily memorized by said operator as a specific type of chord assigned to said punctuation marks and said miscellaneous characters and said brackets.

24. The method of Claim 18 wherein a second plurality of chords involving one of said fingers and one of said thumbs of said operator is assigned to commands for operating a computer, whereby said commands can readily be input, whereby said chords involving one of said fingers and one of said thumbs can be easily memorized by said operator as a specific type of chord assigned to said commands, and whereby accidental input of said commands during input of said letters is prevented.

25. The method of Claim 18 wherein a second plurality of chords involving one of said digits of said operator is assigned to numerals, whereby said numerals can readily be input, and whereby said chords involving one of said digits can be easily memorized by said operator as a specific type of chord assigned to said numerals.

26. The method of Claim 25 wherein said numerals correspond in their natural order to said digits of said operator, whereby chords assigned to said numerals can be easily memorized.

27. The method of Claim 18 wherein a plurality of first pairs of said inputs are assigned a plurality of second pairs of chords, said plurality of first pairs being pairwise related inputs, said plurality of second pairs being each other's mirror image by pairwise exchanging switches assigned to corresponding digits of the left hand and the right hand of said operator, whereby said operator is assisted in memorizing said second pairs assigned to said first pairs.

28. The method of Claim 18 wherein said chords of said first plurality of chords assigned to said letters correspond to two of said fingers of said operator,
said letters more frequently occurring in American English generally being assigned chords easier to enter,
frequently occurring vowels being assigned said chords assigned to said letters corresponding to

corresponding fingers of the left hand and the right hand of said operator,

a second plurality of chords involving only fingers is assigned to characters other than letters,

said second plurality of chords involving three of said fingers of said operator being assigned to punctuation marks and miscellaneous characters and brackets for operating a computer,

a third plurality of chords involving one of said fingers and one of said thumbs of said operator being assigned to commands for operating a computer,

a fourth plurality of chords involving one of said digits of said operator being assigned to numerals,

said numerals correspond in their natural order to said digits of said operator, and

a plurality of first pairs of said inputs being assigned a plurality of second pairs of said chords, said plurality of first pairs being pairwise related inputs, said plurality of second pairs being each other's mirror image by pairwise exchanging switches assigned to corresponding digits of the left hand and the right hand of said operator.

29. A method of enabling an operator to generate a plurality of inputs, comprising:

(a) providing a manual input means having a plurality of digit-operated switches by which a human operator can generate said plurality of inputs by entering chords, each chord comprising a unique combination of switches, each of said switches operated by a specific digit of said operator, and

(b) providing a legend indicating a combination of indicia for each of said plurality of inputs, said indicia selected from the class consisting of colors and tactile indicia, each of said indicia representing a specific digit of said operator, whereby said operator can easily determine which chord to enter to generate one of said inputs.

30. The method of Claim 29 wherein said indicia representing said digits are on said switches assigned to said digits.

31. The method of Claim 29 wherein said switches are keys.

32. The method of Claim 29 wherein said indicia are colors.

33. The method of Claim 32 wherein said colors are pink, red, orange, yellow, white, black, green, blue, purple, and brown, corresponding respectively to the left hand little finger, ring finger, middle finger, index finger, thumb, and the right hand thumb, index finger, middle finger, ring finger, and little finger, whereby

said operator needs to recognize and remember only simple, well-known colors, and whereby said operator can be assisted in memorizing said colors representing said digits by using common knowledge of the order of colors in the spectrum of light as found in a rainbow.

34. The method of Claim 29 wherein said indicia form two easily distinguishable groups, one of said groups representing thumbs of said operator, and one of said groups representing fingers of said operator, said fingers being index, middle, ring, and little fingers, whereby said operator can instantly recognize said indicia representing said thumbs of said operator and said indicia representing said fingers of said operator.
35. The method of Claim 29 wherein said indicia form two easily distinguishable groups, each of said groups representing a particular hand of said operator, whereby said operator can instantly recognize said indicia representing said particular hand of said operator.
36. The method of Claim 29 wherein a plurality of said combinations of indicia are arranged in groups, said combinations of each of said groups being a specific type of combination, whereby said operator can easily determine the specific type of each combination of said groups from the group of said combination.

37. The method of Claim 29 wherein a first group of indicia representing said inputs and a second group of said combinations of indicia are grouped in pairs, each of said pairs pairing one combination of said second group to one of said indicia of said first group, such that entering the chord corresponding to each pair of said pairs generates said input corresponding to said pair, whereby said operator can determine which chord to enter to generate one of said inputs.
38. The method of Claim 29 wherein each of said combinations of indicia is arranged in at least one group, said group representing the class consisting of said fingers of a particular hand of said operator and said thumbs of said operator, whereby said operator can easily determine said indicia of said combinations representing said fingers of said particular hand or said thumbs.
39. The method of Claim 29 wherein said indicia representing said digits are on said switches assigned to said digits,
said switches are keys,
said indicia are colors,
said colors are pink, red, orange, yellow, white, black, green, blue, purple, and brown,
corresponding respectively to the left hand little finger, ring finger, middle finger, index finger, thumb, and the right hand thumb, index finger, middle finger, ring finger, and little finger,
said indicia forming two easily distinguishable

first groups, one of said first groups representing thumbs of said operator, and one of said first groups representing fingers of said operator, said fingers being index, middle, ring, and little fingers,

said indicia forming two easily distinguishable second groups, each of said second groups representing a particular hand of said operator, a plurality of said combinations of indicia being arranged in third groups, said combinations of each of said third groups being a specific type of combination,

a first set of indicia representing said inputs and a second set of said combinations being grouped in pairs, each of said pairs pairing one combination of said second set to one of said indicia of said first set, such that entering the chord corresponding to each pair of said pairs generates said input corresponding to said pair, and

each of said combinations being arranged in at least one fourth group, said group representing the class consisting of said fingers of a particular hand of said operator and said thumbs of said operator.

40. A device for enabling an operator to generate a plurality of inputs, comprising:

- (a) a manual input means having a plurality of digit-operated switches by which a human operator can generate said plurality of inputs by entering chords, each of said chords comprising a unique combination of switches, each of said switches operated by a specific digit of said operator, and
- (b) a legend indicating a combination of indicia for each of said plurality of inputs, said indicia selected from the class consisting of colors and tactile indicia, each of said indicia representing a specific digit of said operator,

whereby said operator can easily determine which of said chords to enter to generate said inputs.

41. The device of Claim 40 wherein said indicia corresponding to said switches are on said switches.

42. The device of Claim 40 wherein said switches are keys.

43. The device of Claim 40 wherein said indicia are colors.